CLAIMS

1. A device for vibration control in a machine for cutting, said machine comprising a cutting tool supported by a tool holder, the device comprising a control unit and converting means which are connectible to the control unit and comprise a vibration sensor and an actuator, and the actuator comprising an active element, which converts an A.C. voltage supplied by the control unit to the actuator into dimensional changes, wherein said active element is adapted to be embedded in the body of the tool holder, and wherein said active element is adapted to be embedded in such manner that said dimensional changes impart turning moments to the body of the tool holder.

2. A device as claimed in claim 1, wherein said active element is adapted to be embedded with its centre axis spaced from the centre axis of the tool holder.

3. A device as claimed in claim 1, wherein said active element is adapted to be embedded close to the surface of the tool holder.

4. A device as claimed in claim 1, said tool holder being elongated and having an end portion which is adapted to be received in a mounting recess of the machine, wherein said active element is positioned along the tool holder such that, when the tool holder is held in said recess, a portion of said active element is within said recess.

5. A device as claimed in claim 4, wherein said portion of said active element consists of approximately half of said active element.

6. A device as claimed claim 1, wherein said active element is plate-shaped.

7. A device as claimed in claim 1, wherein said actuator comprises a double element which consists of two active elements which are attached to each other.

8. A device as claimed in claim 1, wherein said active element is a piezoceramic element.

9. A method for vibration control in cutting, comprising the steps of detecting the vibrations of a tool holder during cutting, and generating control vibrations in the tool holder, by means of at least one active element which is electrically controllable to dimensional changes, the method further comprising the steps of embedding said active element in the body of the tool holder and, for generating the control vibrations, imparting turning moments to the body of the tool holder by generating at least one control voltage and applying the control voltage across said active element, and by varying the control voltage according to the detected vibrations.

10. A method as claimed in claim 9, wherein said step of detecting is performed by carrying out the detection of vibrations piezoelectrically.

11. A tool holder which is adapted to support a tool for cutting, the tool holder comprising an actuator, said actuator comprising an active element, which is electrically controllable to dimensional changes, wherein said active element is embedded in the body of the tool holder and is adapted to impart, through said dimensional changes, turning moments to the body of the tool holder.

12. A tool holder as claimed in claim 11, wherein said active element is embedded with its centre axis spaced from the centre axis of the tool holder.

13. A tool holder as claimed in claim 11, wherein said active element is embedded close to the surface of the tool holder.

14. A tool holder as claimed in claim 11, wherein at least one pair of active elements is arranged in such manner that the active elements included in the pair are oppositely arranged on each side of the centre axis of the tool holder.

15. A tool holder as claimed in claim 11, said tool holder being arranged to be mounted in a machine for boring, said tool holder being elongated and having an end portion which is adapted to be received in a mounting recess of the machine, wherein said active element is positioned along the tool holder such that, when the tool holder is held in said recess, a portion of said active element is within said recess.

16. A device as claimed in claim 15, wherein said portion of said active element consists of approximately half of said active element.

17. A tool holder as claimed in claim 11, wherein said active element is arranged in a recess in the tool holder and is connected with the tool holder via a glue joint which transfers at least part of said dimensional change to the tool holder, and that the recess is sealed.

18. A tool holder as claimed in claim 11, wherein said active element is arranged in a recess in the tool holder and has two opposite power transmitting surfaces, said power transmitting surfaces being engaged with surfaces of the body of the tool holder and said dimensional changes changing the distance between the power transmitting surfaces, and that the recess is sealed.

19. A tool holder as claimed in claim 11, the tool holder consisting of an insert holder for a turning lathe.

20. A tool holder as claimed in claim 11, the tool holder consisting of a teeth holder for a milling machine, wherein the teeth holder comprises active elements, which are helically arranged round the centre axis of the teeth holder.

21. A tool holder as claimed in claim 11, the tool holder consisting of a teeth holder for a drilling machine, wherein the teeth holder comprises active elements which are helically arranged round the centre axis of the teeth holder.

22. A tool holder as claimed in claim 11, the tool holder comprising an embedded, piezoelectric sensor element.

23. A tool holder as claimed in claim 11, wherein said embedded elements are cast into the body of the tool holder.

24. A tool holder as claimed in claim 11, wherein said active element is a piezoceramic element.

25. Use of a device as claimed in claim 1 in a machine, the machine being one of a machine for turning, a machine for milling or a machine for drilling.